V/18346
2

REPORT

ON THE

Government Horticultural Gardens,

LUCKNOW,

FOR THE

YEAR ENDING 31ST MARCH 1906.

ALLAHABAD:
Printed at the United Provinces Government Press.
1906.

Price, three annas (3*d.*)

Digitized with financial assistance from

Hemendra Kothari

on 24 February, 2020

REPORT

ON THE

Government Horticultural Gardens,

LUCKNOW,

FOR THE

YEAR ENDING 31ST MARCH 1906.

ALLAHABAD:

Printed at the United Provinces Government Press.

1906.

No. $\frac{1398}{\text{Va}-890}$ of 1906.

From

THE DIRECTOR OF LAND RECORDS AND AGRICULTURE,
UNITED PROVINCES,

To

THE CHIEF SECRETARY TO GOVERNMENT,
UNITED PROVINCES,
REVENUE DEPARTMENT,
NAINI TAL.

Dated Lucknow, the 17th of May 1906.

SIR,

I HAVE the honour to submit the report on the Lucknow horticultural gardens for the year ending 31st March 1906. The report shows that the condition of the gardens is satisfactory, and that great improvements have been carried out with the aid of the additional funds provided by Government. Acknowledgments are due to the contributors mentioned in appendix B.

2. I have placed on record in the annual report of the department my sense of the loss caused by the death of Mr. Gollan, the Superintendent of the gardens; it is a matter for congratulation that so competent an officer as Mr. Davies was available to fill the vacancy.

I have the honour to be,

SIR,

Your most obedient servant,

W. H. MORELAND,

Director.

Maximum limit of report—Seven pages.

TABLE OF CONTENTS.

I.—Introductory.

Para.		Page.
1.	Charge of the gardens	1
2.	Important administrative events	*ib.*
3.	State of the gardens	*ib.*
4.	Character of the season	2
	II.—Acclimatization and other Experimental Work.	
5.	Fruit and food producing trees and plants	*ib.*
6.	Other trees and plants of economic value	*ib.*
7.	Ornamental trees and plants	*ib.*
	III.—Financial Results.	
8.	Receipts	3
9.	Expenditure	*ib.*
10.	Surplus or deficit...	*ib.*
	IV.—Miscellaneous.	
11.	Training of gardeners	*ib.*
12.	Arboriculture	*ib.*
13.	Flower show	4
14.	Conclusion	*ib.*

Appendices.

Appendix A.	—Statement showing the receipts and expenditure of the Government horticultural gardens, Lucknow, for the year ending 31st March 1906.	5
Appendix B.	—List of contributors to the garden during the year ending 31st March 1906.	6
Appendix C.	—Showing the amount of plants and seeds distributed from the gardens during the year ending 31st March 1906.	7

REPORT on the GOVERNMENT HORTICULTURAL GARDENS, LUCKNOW, for the year ending 31st March 1906.

I.—INTRODUCTORY.

1. *Charge of the gardens.*—The late Mr. W. Gollan was in charge of the gardens from the 1st of April to the day of his death on the 12th September 1905.

I took over charge on the 28th September 1905 and held charge to the end of the year under report.

2. *Important administrative events.*—With much regret I have to record the death of Mr. W. Gollan, the late Superintendent of the gardens, on the 12th September last. Hardly a year had passed since Mr. Gollan took over the charge of the gardens, he having succeeded to the appointment after the death of Mr. Ridley. Previous to Mr. Gollan coming to Lucknow he had served for many years with distinction as Superintendent of the Saharanpur gardens. He was well known throughout India as a horticulturist of the highest order, his advice being eagerly sought after in all matters concerning the garden.

During the short time he held charge of the Lucknow gardens he worked assiduously to carry on the work of improving the garden and effected a great deal in this direction, the results of which are already bearing fruit.

3. *State of the gardens.*—I am glad to be able to report that the many improvements initiated in the time of my predecessor have been carried out with good results.

The wire fencing around the gardens has been completed and protection is now afforded to all parts, besides giving the whole a tidy appearance.

The proposed gateway near the Shah Najaff was erected, the style being that of the ornamental gate, built in the centre of the gardens last year.

Much was done towards improving the lawns about the Sikanderbagh by the laying down of grass, but owing to the early ending of the rains and want of money all that was proposed was not completed. Arrangements have been made to do so this year and to add to the improvements.

A much needed want was supplied during the year in the shape of a glass hot-house for the protection of tender plants during the cold season and the raising of delicate exotic plants. A building for the carpenter and other mistris was erected at the back of the office, also a godown for the storage of pots and other garden requisites.

The large strip of land of about 23 acres lying on the north-east side of the garden and formerly occupied by guava groves and field crops which were hired out to cultivators was cleared during the past cold season.

The land has been partly levelled, and it is proposed to run a road from the paper mills bridge along the side of the river Gumti and join the old road near the corner of the Kadam Rasul and to lay out the ground as an ornamental garden for the reception of specimens of rare trees and shrubs. A rock garden and aquatic garden will be made, also a garden where bulbs may be grown under more or less natural conditions. Taking in of this area has greatly improved the general appearance of the gardens and opened up a number of views which were entirely hidden when the groves of trees existed.

Besides the making of the road above-mentioned, it is proposed to widen several of the existing roads about the gardens and to lay down grass along the sides of them between the road and the plantation and trial grounds.

Many of the old and worthless mango and other fruit trees have been cut away, especially in front of the office. These trees never paid for the land they took up and the labour expended on them, therefore it was decided that to improve the appearance of the garden and make use of the land for more useful purposes to do away with them. In future it is proposed to direct more attention to the propagation of stocks of young fruit trees than to nursing old trees for the sake of the small revenue they produce.

A good deal of clearing has been done in various parts of the garden with the object of weeding out a lot of trees of more or less spontaneous growth and

giving prominence and room for development to more useful and ornamental trees and shrubs.

During the present year it is proposed to build a new plant-house for the display of plants in flower, especially chrysanthemums, also a pergola for plants of a creeping or climbing nature, and to pull down and re-erect with iron the wooden propagating house which is very old and has fallen into decay.

4. *Character of the season.*—The total rainfall of the year amounted to 30·07 inches. The rainy season proper commenced with light showers on the 25th June and ended about the 16th August. This early cessation showed itself on many young plants in the nurseries and interfered somewhat with the germination of vegetable and flower seeds.

I am glad to be able to report that scarcely any injury was done to either trees or crops by frost, though cold dry winds during the early part of the winter damaged to some extent the crops of tomatoes, Cape gooseberry, capsicum, brinjal and other soft wooded plants.

The damage done by frost to young fruit trees in the previous year has, during the year under report, been more or less repaired by extra attention having been given to their propagation, and I am glad to say that the garden now possesses a fair stock of all the trees most in demand. It will, however, take at least another season to work up the stock sufficient to meet all requirements.

II.—ACCLIMATIZATION AND OTHER EXPERIMENTAL WORK.

5. *Fruit and food-producing trees and plants. Fruit crops.*—During the past year the following fruit trees produced fair crops:—oranges, mangoes, loquats, grapes, figs, limes, and pummelows, peaches and plums of sorts.

Fruit nurseries.—The demand for fruit trees was as large as in previous years, but owing to the young stock having been almost entirely destroyed by the previous year's frost these demands could not be complied with. It is hoped that the present season will witness a change for the better in this respect as our present stock is very promising.

See Appendix C.

Mango and peach.—The "Multani" mango plants mentioned in last year's report have made good progress; also the two varieties of peach named "Waldo" and "yellow Peshawar" introduced from Saharanpur.

Vegetable garden.—Vegetables of the usual kinds suitable for *dalis* were grown, the crops being in most cases good. The demand for acclimatized vegetable seed is steadily growing, and I propose to extend the area of cultivation so as to be able to cope with this demand and make further experiments with such varieties which have so far not received the attention they deserve. I do not consider that there is any need for making any special effort for the cultivation of vegetables for supplying *dalis*, as they can be as cheaply purchased from the numerous native cultivators in the district and grown by them as well and at a much less cost than they can be in the gardens.

The number of *dalis* of vegetables issued daily from the gardens during the past cold season numbered only 12, and this being so, I do not see the need for setting apart any particular area of the garden to meet such a small requirement as the land is wanted for more important and profitable purposes.

6. *Other trees and plants of economic value. Agave Sisalana.*—The demand for these fibre-yielding plants was not so large as in previous years, only 2,000 being supplied. We have a good stock of young plants in all stages of growth and are prepared to meet any ordinary indents.

Castilloa elastica.—The seedling plants of this rubber-yielding tree mentioned in last year's report are doing well and have made good growth.

Experiments are being made with varieties of papaya (*carica papaya*) the fruit of which is too well known and appreciated to need description.

Trials are also being given to the "Caniagre" (*Rumex hymenosepalus*). This plant produces long underground tubers which are said to contain a large percentage of tannin matter of superior quality.

7. *Ornamental trees and plants.*—During the past year 18,848 ornamental trees and shrubs were issued from the gardens against 17,949 for 1904-1905. Bulbs and tubers to the number of 5,242 were distributed against 5,966 of the previous year. The total issue of all plants for the year was 37,720 against 37,480 of 1904-1905.

See Appendix C.

There is a good stock of plants in the nurseries, but for many of them there is little demand. Special attention is being given to the propagation of plants for which there is a ready sale, and I hope in a year or two with the aid of the extended plant house accommodation to have a full stock of young healthy plants suitable for sale and distribution.

Seeds.—As I have previously mentioned the demand for vegetable seeds is steadily increasing, the year under report witnessing a sale of 6,482 packets against 4,746 packets for the previous year. The sale of flower seeds was 6,629 packets against 7,149 packets of 1904-1905, and the total weight of seed sold 2,145 against 1,880 lbs. last year.

III.—FINANCIAL RESULTS.

8. *Receipts.*—The receipts of the gardens were estimated at Rs. 20,000, while the actual receipts were Rs. 20,662. Plants, seeds and flowers were issued free and at reduced rates to the value of Rs. 3,015. If this amount be added to that of actual receipts the total revenue for the year is Rs. 23,677, or an increase of Rs. 2,221 over the figures of last year. The actual receipts are the highest on record, and this in spite of the loss of so much valuable young stock through frost during the preceding winter. The present year ought to show a further improvement provided the seasons are favourable. See Appendix A.

9. *Expenditure.*—This was estimated at Rs. 25,638, while the actual expenditure was Rs. 32,513 or Rs. 6,875 more than the estimate. Extra grants of Rs. 800, *vide* G. O. No. 232/I-1289-1904, dated the 26th January 1905, and Rs. 7,000, *vide* G. O. No. 217/X-BX/1-10, dated the 12th January 1906, were sanctioned for the general improvement of the garden which accounts for the excess expenditure. See Appendix A.

10. *Surplus or deficit.*—When the total receipts of the year are shown against the total expenditure the result shows a deficit of Rs. 8,836. If the book credits are excluded, and only the actual cash realized and paid into the Treasury shown, the result gives a deficit of Rs. 11,851.

IV.—MISCELLANEOUS.

11. *Training of gardeners.*—Thirty-nine applications for trained gardeners were received during the year but only three were complied with. In most cases the pay offered was too low, while in others the applications were from remote places. In any case it would have been impossible to supply men in such a number.

There is always a good demand locally for trained men, and as most of the candidates have their homes in or near Lucknow the inducements to leave the station have to be exceptional before they will take situations at any distance. I should be glad to see more men come in from out-stations for training in the gardens, and I think that something might be done in this direction with the assistance of officers in charge of districts. The men should be young and of fair intelligence and with a general knowledge of the simple work of a garden.

There were 16 apprentices on the books at the beginning of April 1905: of these four left the gardens during the year and were replaced by others. Nearly all the apprentices belong to the villages adjacent to the gardens and are related to men already serving in the gardens. These boys show a fairly keen interest in their work and, given encouragement, there is no reason why they should not turn out excellent malis.

The one drawback is that most of them are unable to read and write, and as this qualification is invariably required of them where the charge of a garden is concerned, it would be as well if the boys equipped themselves with this ordinary accomplishment, for without it they can never expect to rise above the ordinary *ruck* of malis.

Subscribers.—The ten subscribers mentioned in last year's report still remain on the books.

12. *Arboriculture.*—In the report for 1904-1905 mention was made of the unsatisfactory condition of the arboricultural nursery. I am glad to say that this condition of things has to a great extent been remedied during the past year. A large number of plants that had grown too big for transplanting had to be thrown away, but on the other hand the stock of young plants has been considerably increased, and though not at present large enough for transplanting, the coming rains

ought to show a marked improvement and many of the more advanced specimens will be fit for distribution. The number of plants in the nurseries in a healthy condition is 35,617, representing all the best kinds suitable for roadside and grove planting. The number of plants distributed during the past year was 1,505.

The allotment for maintenance was Rs. 1,280, out of which Rs. 1,082 were spent, the balance of Rs. 198 lapsing.

The revenue for the year was Rs. 75.

An arboricultural class was established during the past year, 11 men presenting themselves for a training in the art of raising and growing trees suitable for roadside planting. These men were sent under the orders of the chairmen of district boards in these provinces and were given four months' special training in the preparation of seed beds, raising the young plants, transplanting in the nurseries and along the roads, pruning, etc., and the selection of suitable trees.

At the end of the term they were examined by me and granted certificates according to the knowledge they showed of the subject. I found the majority to be intelligent and persevering men and well qualified to undertake the supervision of roadside avenues.

Eucalyptus plantation.—The trees in this plantation are in a flourishing condition and appear to have benefited by the judicious thinning out mentioned in last year's report.

On one side of the plantation a plot of land is set aside for the propagation and cultivation of agavas of sorts, chiefly agava sisalana. These plants thrive luxuriantly, the old specimens flowering and thereby providing a succession of healthy young bulbils which enable us to increase the stock in sufficient quantity to meet all present demands.

13. *Flower shows.*—A chrysanthemum show, the first of its kind, was held in the Badshah Bagh on the 2nd December 1905 and proved very successful from a horticultural point of view. The show was well supported and the exhibits staged were well grown and went to prove that this lovely flower can be cultivated with success in Lucknow.

The annual flower and vegetable show was held as usual in the Wingfield Park on the 3rd March 1906. The show as a whole was well up to the standard of previous years, though there appeared to be a slight falling off in the quality of vegetables exhibited: but this may be accounted for by the dry cold weather experienced early in the season which retarded the growth of the plants.

The receipts of the chrysanthemum show were Rs. 95 and the expenditure Rs. 236.

The receipts of the annual flower show were Rs. 753 and the expenditure Rs. 880.

There was therefore a deficit of Rs. 268 on the two shows. This deficit is explained by the falling off in subscription by the public, the amount subscribed this year being Rs. 515, while that of the previous year was Rs. 904.

The total amount now standing to the credit of the flower show account with the Bank of Bengal is Rs. 497.

14. *Conclusion.*—I am glad to record that when I took over charge of the gardens I found the office in good order and have since received generous help from Anand Bihari Lal, the head clerk, and the office staff.

Ganeshi Chaudhri has rendered me much assistance in carrying out the improvements effected in the garden.

H. J. DAVIES,
Supdt., Govt. Horticultural Gardens,
Lucknow.

The 24th April 1906.

APPENDIX A—*(See report, paragraphs 8 and 9).*

Statement showing the receipts and the expenditure of the Government horticultural gardens, Lucknow, for the year ending 31st March 1906.

Heads.	Actuals of 1904-1905.	Budget head for 1905-1906.	Actuals of 1905-1906.
1	2	3	4
	Rs.	Rs.	Rs.
Receipts	19,351	20,000	20,662
Total Receipts ...	19,351	20,000	20,662
CHARGES.			
Superintendent	3,856	3,825	2,634
Establishment	5,353	7,414	6,690
Allowances	188	200	192
SUPPLIES AND SERVICES.			
Purchase of seeds and plants	4,075	4,500	5,102
Purchase of live-stock	205	600	170
Feed of live-stock	1,753	1,800	1,638
Purchase of manure	100	500	408
Rent of land	...	24	24
Maintenance of premises	2,451	2,500	8,920
Cooly labour	1,635	1,400	2,264
Contingencies	2,561	2,875	4,471
Total Charges ...	22,177	25,638	32,513

APPENDIX B.

List of contributors to the garden during the year ending 31*st March* 1906.

Name of contributor.	Name and description of articles contributed.
B. Nathu Singh, head gardener, Viceregal Park, Barrackpore.	14 oz. swietenia mahogani.
	1 packet asparagus phemosus.
	1 „ painciana alata.
	1 „ areca sp.
	9 oz. murraya exotica.
	1 „ painciana alata.
	1 lb. 12 oz calophyllum inophyllum.
	8 oz. seaforthia elegans.
	10 „ adevanthera panoniana.
	13 „ elais quinensis.
	1 „ swietenia mahogani.
	4 „ cinnamomum inaspermum.
	3 „ kentia belmoriana.
	2,000 seeds oreadoxa regia.
	1 packet miliosma simplicifolia.
	1 „ cochlospermum gossypium.
	5 lbs. caryota urens.
	1 packet thrinax glanca.
Dr. A. Robertson	1 leaf opuntia sp.
Proschowsky Parcles	1 packet acacia melanovylon.
Tropiques Nice A. M. France ...	1 „ aloe striata.
	1 „ gillardia picta.
	1 „ melianthus major.
	1 „ pandanus luzonensis.
	1 „ leptosyne gigantea.
	1 „ pithecolobium acte.
	1 „ pithecolobium acte Branco.
	1 bulb bischorneria bractiata.
A. Sharpe, Esq., Dilkusha Garden, Lucknow.	½ oz. sesbania grandiflora.
The Superintendent, State Gardens, Baroda.	2 packets palm seeds.
Major Bell, Dilkusha, Lucknow ...	5 „ unnamed hibiscus seeds.
Mayneyo, Burma	1 packet cleonie sp.
The Superintendent, Botanical Gardens, British Guinea.	1 „ martinezia corollsina.
Ramyad Lal, head gardener, Dumraon Raj Gardens, Arrah.	1 plant lantava sellowiana.
J. C. Harvey, Esq., Mexico ...	4 packets shrub seeds.
The Agricultural Department of U. S., America.	16 „ „ „
R. Gill, Esq., F.R.H.S. Landscape ...	6 plants clinia marie reimero.
Gardener Peneyu, Cornwall ...	30 „ chrysanthemums with names
The Superintendent, Royal Botanical Garden, Calcutta.	2 packets palm seeds.
	124 plants of sorts.
S. H. Butler, Esq., I.C.S., Lucknow,	32 new rose plants with names.
The Superintendent, Botanical Department, Trinidad.	1 packet sicona odorifera.

APPENDIX C—*(See report, paragraphs 5 and 7).*

Showing the amount of plants and seeds distributed from the gardens during the year ending 31st March 1906.

Names of departments, etc. supplied.	Plants.									Seeds.					Total.	
	Fruits.			Ornamental and timber trees.		Ornamental plants and shrubs.		Bulbs and tubers.	Total.	Vegetables.	Flowers	Fruits.	Trees and shrubs.	Miscellaneous	Number of packets.	Weight.
	Plants.	Cuttings.	Strawberries.	Plants.	Cuttings.	Plants.	Cuttings.									
																lbs. oz.
General public	2,608	20	3,275	4,106	...	17,585	1,658	4,808	34,060	6,201	6,368	8	175	...	12,752	2,085—5
Government and public gardens in India.	611	...	...	1,046	...	1,255	...	434	3,346	195	253	...	25	...	473	233—4
Government and public gardens in other countries.	...	40	...	...	...	...	...	...	40	...	...	...	...	...	...	...
Jails	242	...	...	24	...	8	...	...	274	86	8	...	3	...	97	26—12
Total ...	3,461	60	3,275	5,176	...	18,848	1,658	5,242	37,720	6,482	6,629	8	203	...	1,3322	2,145—5

Digitized with financial assistance from

Hemendra Kothari

on 24 February, 2020

ORDERS OF GOVERNMENT.

No. $\frac{1840}{\text{I—637-1906}}$ OF 1906.

FROM

E. F. L. WINTER, ESQ.,

CHIEF SECRETARY TO GOVERNMENT,

UNITED PROVINCES,

To

THE DIRECTOR OF LAND RECORDS AND AGRICULTURE,

UNITED PROVINCES.

DATED NAINI TAL, THE 15TH JUNE 1906.

SIR,

REVENUE DEPT.

I AM directed to acknowledge the receipt, under cover of your letter no. $\frac{1398}{\text{VA—890}}$, dated the $\frac{17\text{th}}{31\text{st}}$ May 1906, of the annual report on the Government Horticultural Gardens, Lucknow, for the year ending 31st March 1906.

2. The acknowledgements of Government should be conveyed to the contributors to the gardens.

I have the honour to be,

SIR,

Your most obedient servant,

E. F. L. WINTER,